

REMARKS

Claims 1-28 are pending in this application. By this Amendment, claim 1 is amended to more clearly distinguish over the applied references, and claim 2 is amended for clarification purposes only. Reconsideration in view of the above amendments and following remarks is respectfully requested.

The Office Action rejects claim 2 under 35 U.S.C. §112, second paragraph. Applicants amend claim 2 to obviate the rejection. Accordingly, Applicants respectfully request that the rejection be withdrawn.

The Office Action rejects claims 1, 5, 8, 9, 11 and 20 under 35 U.S.C. §102(b) as being anticipated by Mestha (U.S. Patent No. 5,708,916); claims 2, 12-16, 21-26 and 28 under 35 U.S.C. §103(a) as being unpatentable over Mestha, and further in view of Pfeiffer (U.S. Patent No. 5,967,033); claims 3, 6 and 7 under 35 U.S.C. §103(a) as being unpatentable over Mestha, and further in view of Giorgianni (U.S. Patent No. 5,452,111); claim 4 under 35 U.S.C. §103(a) as being unpatentable over Mestha, and further in view of Vincent (U.S. Patent No. 5,671,059); claims 10 and 19 under 35 U.S.C. §103(a) as being unpatentable over Mestha, and further in view of Lloyd (EP-PAT-NO 625847); and claims 17, 18 and 27 under 35 U.S.C. §103(a) as being unpatentable over Mestha, and further in view of Pfeiffer and Arai (U.S. Patent No. 5,771,311). Applicants respectfully traverse the rejections.

In particular, Applicants assert that none of the applied references disclose or suggest a device and illumination independent color reproduction system, including at least a color marking device that includes a color sensor that measures a reflectance spectra, and a second processing circuit that converts the measured reflectance spectra into a measured parameter vector, as recited in independent claim 1.

Furthermore, none of the applied references disclose or suggest an apparatus for improving color reproduction, including at least a color sensor that measures reflectance

spectra of an image printed based on a processed reference parameter vector, and a second processing circuit that converts the measured reflectance spectra into a measured parameter vector, as recited in independent claim 8, and similarly recited in independent claim 9.

Specifically, Mestha discloses a xerographic control system that relies only on *developed mass per unit volume* patch sensors to control electrostatic parameters. The DMA sensor measurements measure *actual density* of the printing material (toner or ink) regardless of the color, and then the sensor readings are used to make suitable adjustments to the system such as changing developer bias to maintain a consistent quality.

Pfeiffer discloses a method of determining ink coverage in a print image whereby a pixel is scanned photo-electrically in a visible range of the spectrum and also in the near infrared range for determining the ink coverage of printing inks involved in printing one pixel of a print image.

Giorgianni discloses methods that produce intermediary color image processing and/or data storage metrics that are independent of the input image origins.

Vincent discloses multiple electroilluminance (EL) emitters that are constructed from layers deposited on a substrate and incorporated with a broadband sensor to form a colorimeter. The EL emitters produce light covering spectral segments determined by a filter layer and an active layer wherein the spectral segments sufficiently cover the visible spectrum to enable a wide range of colors to be measured.

Lloyd discloses a self-calibrating color printer that includes a movable optical sensor assembly which first calibrates itself by measuring an known color gamut located within the movement range of the sensor assembly.

Arai discloses that color separation values such as CMYK values from an input device are transformed into characteristic parameter values by a first transforming device having a neural network which has undergone learning in advance in such a manner as to output

characteristic parameter values obtained by an analysis of spectral distributions which correspond to color separation values and are illuminant-independent.

In contrast to Applicants claimed invention, none of the applied references disclose or suggest a device and illumination independent color reproduction system, including at least including at least a color marking device that includes a color sensor that measures a reflectance spectra, and a second processing circuit that converts the measured reflectance spectra into a measured parameter vector.

Furthermore, none of the applied references disclose or suggest an apparatus for improving color reproduction, including at least a color sensor that measures reflectance spectra of an image printed based on a processed reference parameter vector, and a second processing circuit that converts the measured reflectance spectra into a measured parameter vector. On the contrary, nowhere in the applied references are these features disclosed or suggested.

Instead, Mestha is concerned with measuring the density of the toner so that electrostatic parameters can be controlled. However, when measuring the density of the toner, Mestha does not measure reflectance spectra of a color because Mestha is not concerned with, for example, reproducing a color. Thus, nowhere in Mestha is it disclosed that the electrostatographic printing machine measures reflectance spectra of a color, and then converts the measured reflectance spectra into a measured parameter vector so that a colormetrically matched reproduction of a color will produce color prints that will not appear different when the color prints are viewed under changed lighting conditions. Accordingly, because Mestha fails to disclose each and every feature as the claimed invention, Applicants respectfully request that rejection under 35 U.S.C. §102(b) be withdrawn..

Furthermore, because the applied references all fail to disclose these features, any combination of the applied references would not have resulted in a device that produces the

same spectral power distribution in a reproduced image as in an original image because any resulting device could not avoid image color variations caused by changes in illuminance and observers. Based on the above discussion, Applicants also assert that it would not have been obvious to combine the applied references to arrive at the claimed invention. Accordingly, Applicants respectfully request that rejection under 35 U.S.C. §103(a) be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-28 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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